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RUDDER FLUTTER

Fall 2009 — *Serving Idaho's Aviation Community for over 60 Years* — Vol 55, Issue 4

ELTs, Personal Satellite Trackers...and YOU! (Part 1)

By: Frank Lester
Safety/Education Coordinator

Over the last year, we at Aeronautics have been ardent in our desire to encourage aircraft owners to upgrade to the 406 MHz ELT. Now, with the emerging use of Personal Satellite Trackers (PST) in aircraft, it is imperative that we accelerate that discussion. We need to take a hard look at how continued use of the 121.5/243.0 MHz ELTs and the advent of PSTs as quasi-aircraft emergency beacons have and will continue to impact Search and Rescue (SAR).

These discussions began with the recent October Safe Pilot meetings and will continue in subsequent issues of the ***Rudder Flutter***. The series will culminate with our Safe Pilot meetings next April or May. Our purpose throughout is fourfold: first, to ensure everyone understands the search structure within Idaho; second, to strongly encourage the switch to the 406 MHz ELT; third, to inform every pilot of the use, benefits and limitations of PSTs with respect to aircraft; and fourth, to discuss how we can successfully incorporate all of these devices into the search process and improve coordination during an aerial search.

Would you buy a car with brake lights that no one could see or a horn that no one could hear? I think that most of you would give a resounding "NO!" to that question. Then why do we still use ELTs that the SAR satellites no longer "see" or that few people, if any, hear? Yet we have a significant number of aircraft owners who, for various reasons, have not made the switch to the 406 MHz ELT.

The accident at Simonds last summer resulted in a severely injured CFI who was in need of immediate medical evacuation. In this case, a SPOT PST contributed significantly to saving the CFI's life. However, it was very disconcerting that the aircraft's 121.5 MHz ELT was working as advertised, but no one heard it. I made a point to overfly the crash site the day after to specifically determine whether or not the ELT was working properly. It was still banging away; however, we hadn't received a single report from anyone who may have heard it. Why retain equipment, incurring inspection and maintenance costs, that fails to render the assistance it was designed to provide?

Granted, nothing is perfect. Even the most well designed 406 MHz ELT can fail under the right circumstances. But the fact that you don't have to be conscious to activate the system, and that there is a dedicated web of satellites overhead to monitor your ELT (provided you have a 406 installed), greatly increases the probability that you will be found.

To fully understand the importance of ELTs, you must first understand the SAR system, how it operates, and its relation to local search agencies. The following is a brief description of the

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INSIDE

Land-use near airports still a concern

Land-use policies and the encroachment on local airports has been a subject of discussion for many years. The problems that we face today have changed little from those faced 38 years ago. The article to the right was published in the December, 1971, edition of the ***Rudder Flutter.*** It was written by then Aeronautics Director Darrell Manning. Today, General Manning is the Chairman of the Idaho Transportation Board.

The ***Rudder Flutter*** is published by the Idaho Division of Aeronautics, Office of Safety and Education. Articles appearing in this publication are the opinion of the writer and do not necessarily represent the views of the Staff, the Administrator, or the Department. All reasonable attempts are made to ensure the accuracy of the articles contained herein. The ***Rudder Flutter*** is published quarterly. All articles should be submitted to this office for review.

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As Idaho grows, new patterns of distribution for population and Industry will evolve. These changes will require expanded air service to provide a balanced transportation system. Growth must, however, be planned in advance or the problems of inadequate planning which already plague us will prolificate.

It seems ironic that as aircraft use has been increasing, many communities have been closing in around our airports to use available land for expansion. The continued existence of many of our established airports has been threatened whenever the airport needs to grow to accommodate increased demand or there is a competitive use for airport or adjacent property.

This increasing encroachment of competitive land uses and rapidly rising land values places all of our airports in jeopardy. Cities under the financial strain of inadequate tax revenues have actively solicited new business to bolster their meager tax base and, on occasion, have forgotten the need for the airport. If carefully planned, the combination of airport and light industry can become a valuable asset to a community. Some communities have considered the "Airport Industrial Park" concept as a means to help alleviate financial problems. However, policy makers must remember that an airport industrial park is primarily an airport and without proper planning can become a disaster.

Proper land use planning and zoning is the only way to protect our existing airports. Each community should carefully look at their airport resource to see if they can grow with the changing transportation picture, or if they are allowing encroachment to slowly destroy their airport.

It is obvious that it would be foolhardy for a community to spend thousands of dollars improving a runway only to have a grain elevator erected in the approach zone. Most of our encroachment problems, however, are more insidious. Typical examples are the slowly encroaching housing developments, piling logs higher at the studmill lot this year than last, and growing trees. Most accumulative changes in land use are not immediately noticeable, but over a few years constitute a hazard to the flying public and to the continued existence of the airport.

Idaho communities need to look to the future and create zoning which would prevent the creation or establishment of structures or objects of natural growth which would constitute hazards or obstructions to aircraft operating to or from their airports. An airport zoning ordinance passed by the local government can be an effective means of controlling the height of structures and generally in attaining compatibility of land use in the vicinity of an airport.

If aviation will look to the future in planning and zoning as they have in the past in development, an impending land use crisis can be avoided.

It has been said to many generations of procrastinators, "nunc aut minguam" (now or never). For Idaho the "now" is our only choice.

Driggs and Emmett Celebrate Airport Upgrades

Courtesy of ITD Transporter Staff, Lillian Bowen, Driggs Project Manager and Nadine Burak, IAA Member

Local economic development officials joined pilots and community leaders on October 14 in Emmett to celebrate completion of a runway reconstruction project at Chuck Sawyer Field, the city's airport. The $600,000 project is a culmination of about five years of work that has significantly improved the airport as an economic centerpiece for the community. JV DeThomas, Administrator of ITD's Division of Aeronautics, joined Emmett resident Lt. Gov. Brad Little, to cut the ceremonial ribbon. Edith Sawyer, the widow of Chuck Sawyer, for whom the field is named, helped celebrate the project's completion.

(L-R) Lt Gov Brad Little, Edith Sawyer, JV DeThomas, Aeronautics Administrator and Bill Statham, Aeronautics Airport Planning and Development Manager

Local resident and IAA member Nadine Burak added that because of a fantastic cooperative effort by local pilots, the City of Emmett, Gem County and the Idaho Division of Aeronautics, the runway now has a new surface and is ready for traffic. She further offered the reminder that there is low cost 100LL fuel, available 24 hours a day at the Back Country Fuel Stop and the Country Club Cafe is open with good food and great service.

Driggs also celebrated the opening of their new runway on October 24. Aeronautics Board Chairman Rodger Sorensen joined more than 100 local residents at the opening ceremonies. According to Project Manager Lillian Bowen, in spite of the weather, the opening activities included a roasted pig with all the trimmings, a small air show, and the official ribbon cutting.

Aeronautics Board Chairman, Rodger Sorensen (second from left) joins local Driggs residents for the official ribbon cutting.

Bowen's company, The Right Approach, teamed with HDR as the actual design firm for the project. The primary objective for the runway and taxiway reconstruction was to upgrade the facility from a Class B-II to a Class C-II runway. The final product: a smoother, flatter, wider runway with larger safety area, improved connector taxiways and an improved parallel taxiway.

In addition to improving accessibility and safety for larger aircraft, the project proved to be an exercise in sustainable construction practices. It was designed so that materials excavated within the project site boundaries could be processed and re-used in the construction of the new runway and taxiway pavement structures. Eliminating the need to haul in materials from off-site helped to reduce the overall construction cost, reduce fuel consumption and reduce the impact the construction had on this rural community.

Congratulations to everyone involved in these very successful projects. When government and citizens work together, the community always wins.

Photos courtesy of ITD Transporter Staff, Lillian Bowen, and Dr. Rich Sugden.

Driggs Runway

Radio Chatter

By: Frank Lester
Safety/Education Coordinator

2010 Winter Olympics…the TFRs…They are A'Commin'…

Beginning January 29, 2010, and continuing through March 24, the Winter Olympic and Paralympic Games will take place in Vancouver, British Columbia. As can be expected, there will also be an accompanying heightened security awareness including the ever-present Temporary Flight Restriction (TFR). Most of us have already received a brochure in the mail from the FAA discussing the security measures to be implemented. I strongly recommend that you take the time to read this brochure and visit www.navcanada.ca and http://tfr.faa.gov/tfr2/list.html for complete details on the restrictions. A limited number of copies of the **2010 Winter Olympic Games Pilot Information** brochure can be picked up at the main counter in Aeronautics. You can also email me; I will send you an electronic copy.

Again, I strongly advise those of you planning to fly in that direction during the winter games to read and understand the information thoroughly. They are not taking security breaches lightly. Here are some points taken from the brochure worth repeating:

- **CHECK NOTAMS OFTEN AND FLY INFORMED!**
- Know your intercept procedures.
- The restricted airspace extends into the United States and will be in effect 24/7 during the entire period covered by the NOTAM.
- Remember to check NOTAMs before each flight as information may have changed.
- There is a list of operations prohibited within the Olympic TFR concerning "Fringe Airports" – read it.
- **NOTE: If your aircraft is not equipt with an Operational Mode C or Mode S transponder and two-way radio communication, you will not be allowed to fly in the TFR, or from the fringe airports that are located within the TFR.**

This from the AOPA: Help open doors into Olympic TFR

Planning a flight near Vancouver? Don't let the two-month temporary flight restriction over the 2010 Winter Olympics and Paralympics foil your winter plans. Tell AOPA about your travel plans during the games. The association will inform the TSA of the number of pilots planning to fly into the restricted airspace so that the agency can prepare gateway procedures to smooth the process of flying into and out of the area before the games start January 29.

GA Pilots Come Through for Albanian Students

(Courtesy of Mike Weiss)

The aviation interest club (pictured above) at the American Library in Korca, Albania, has received five boxes of charts, books, E6B computers, magazines, and two copies of Microsoft flight simulator. I was able to buy a joy stick and a graphic accelerator card locally for the computer, which was donated to the library a few years ago, so we now have flight simulator training available as well. We have about ten kids between the ages of 10 and 17 who attend regularly. We meet twice a week after school.

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Radio Chatter

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Thanks to all of you, Korca undoubtedly has the best aviation collection in the country and probably in the Balkans. I am astounded and can't thank you all enough. There are at least a few Albanians who can now find Idaho on the map.

You might be interested to know that I am meeting with the Mayor of Korca next week to talk about the future of general aviation in the Korca region and its role in economic development (one of the roles of the Peace Corps is to help with community development). I plan to use some of the information from the Idaho Division of Aeronautics web site on the impact of airports for the discussion. Also, the local TV station wants to come out and do a story on the club. Maybe we can get them interested in general aviation and the state of the local airstrip. Things are changing in Albania.

I know times are tough for general aviation back in the US. I have confidence that things will improve. There is such a need and potential for the growth of aviation in developing countries. Consider that more than half of all daily aviation activity in the world occurs in the USA, and when only GA is measured, that percentage increases dramatically. If only a small part of that potential is realized, the future of GA is bright indeed.

Looking forward to seeing and flying with you again in 2011.

- Best regards from Albania and thanks again, Mike Weiss

Bird Museum Co-Founder Receives National Medal

(Courtesy of Rachel Riddle Schwam of Sagle, Idaho)

Dr. Forrest M. Bird received the National Medal of Technology and Innovation on Wednesday, October 7, 2009, from President Barack Obama at a ceremony in the East Room of the White House. The National Medal of Technology and Innovation is awarded annually and recognizes those who have contributed to the math, science, technology, innovation, chemistry and engineering fields of study and practicum.

Dr. Bird (seated at far right) listening to the President's remarks.

The evening before the ceremony, an intimate reception was held at the United States Patent and Trademark Office (USPTO) and the National Inventors Hall of Fame in Alexandria, Virginia where the Laureates were presented with commemorative pins, and a brief history of their award. Richard Maulsby, Director of the USPTO, attended and celebrated this wonderful achievement with the Laureates and their families.

Photos courtesy of Rachel Schwam

President preparing to present Dr. Bird his award.

MONITOR GUARD FREQUENCY 121.5!

If you hear a distress signal or radio call:
Note your altitude, location and time
and
PASS IT ON... IMMEDIATELY!!!

- **ATC or FSS**
- **FSS: 800-WXBRIEF (800-992-7433)**
- **Idaho State Communications (800-632-8000)**
- **Local FBO**
- **Local County Sheriff**

Airport Maintenance

By: Gary McEllheney
Airport Maintenance Manager

2009 Volunteer Program Huge Success

On behalf of the Division of Aeronautics, I would like to express my sincere appreciation for all the volunteer labor expended in maintaining the state's airports this past season. Not only did Idaho pilots provide their time and labor, but many non-resident pilots came from neighboring states to participate in those work parties.

During the 2009 season, volunteers logged 657 hours of work maintaining Idaho's premier backcountry airstrips, the largest number of volunteer hours in recent years. The airports that benefited from this volunteer effort include Magee, Big Creek, Henry's Lake, Smiths Prairie, Pine, Thomas Creek, Twin Bridges, Copper Basin, Cavanaugh Bay and Warm Springs.

Maintenance actions included irrigating and mowing runways, clearing debris, fence repair, rodent control, windsock maintenance, equipment maintenance, filling holes and clearing rocks from the runway. Organizations donating their time included the Treasure Valley and Coeur d'Alene Chapters of the IAA, Treasure Valley Chapter of the Idaho 99s, Civil Air Patrol's Eagle Rock Squadron, Gooding Airport Flyers Association, Ponderosa Aero Club, Aeronautics Advisory Board Chairman Rodger Sorensen and Cavanaugh Bay caretaker Allen Lieske. Special thanks go to Dan Zaccanti and George Barnhart for their efforts in organizing the cleanup at Magee Airport after the spring flood. More than 200 hours of work was logged. Great job!

If there are others who have donated time but were not recognized here, I apologize for the oversight. It is probably due to the fact that we never received any volunteer reporting forms. We encourage **all** volunteers to report their hours for two important reasons: first, to ensure that you are covered by workers compensation; and second, that an accurate count of volunteer hours is maintained. This information is critical in reports Aeronautics must provide the Legislature, Transportation Board and the local community.

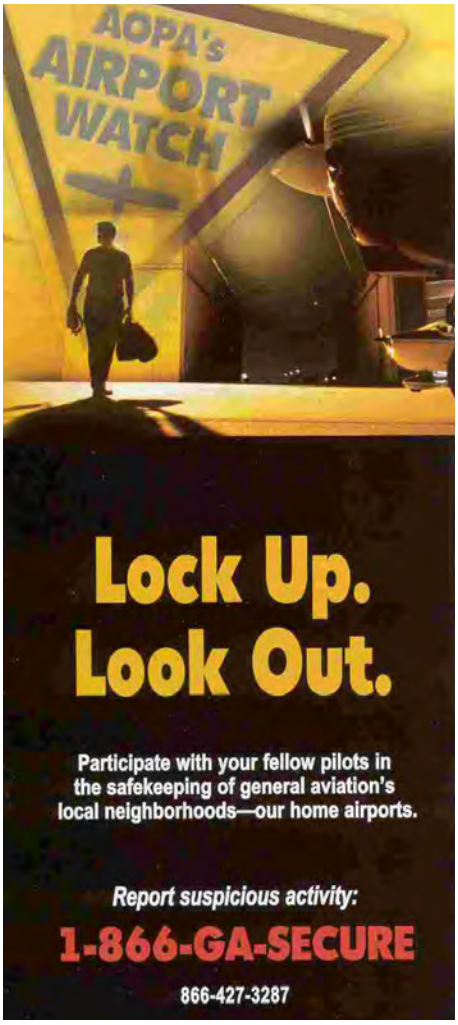
Courtesy Car Program

The Division of Aeronautics administers courtesy cars at 14 locations throughout the state. The courtesy cars are available at the following airport locations for pilots to rent at a reasonable cost:

Bonners Ferry
Buhl
Gooding
Grangeville
Jerome
Kamiah
Malad
Mountain Home
Preston
Rexburg

Summer Seasonal Locations:

Cavanaugh Bay
Garden Valley
Johnson Creek
Smiley Creek



Aviation Medical Matters

Blood Pressure - Easing Airmen's Fears

By: Paul Collins, MD, AME

As an Aviation Medical Examiner (AME), looking at an airman's blood pressure may sometimes even make my pressure go up. There is no doubt that high blood pressure, called hypertension, is a common problem for many airmen. The good news is the FAA now recognizes that treatment is much better than just "living with it," especially since modern medications have so few side effects. Compare that with not treating your hypertension and the alternative of stroke or heart attack; the scale is definitely on the side of treatment. The "silent killer," high blood pressure, in most cases, should not be a reason to stop flying.

Hypertension is called the "silent killer" because it remains silent until a complication occurs. That complication may be a stroke, heart attack, kidney failure or even heart failure from all those years of stress that hypertension has created.

What is a "high" blood pressure? Recently, the level at which high blood pressure becomes a concern was set at anything over 120/80. Considering previous recommendations, this is relatively low but was lowered because the data shows that even a mild elevation has consequences. The recommended attention levels are described in the table below:

Hypertension Categories

		Systolic	Diastolic
Baseline		120-130	80-90
Mild	Stage 1	140-159	90-99
Moderate	Stage 2	160-179	100-109
Severe	Stage 3	180-209	110-119
Very Severe	Stage 4	210 or >	120 or >

The FAA's limit is 155 systolic over 95 diastolic. Although anything over 155/95 is definitely out of bounds, even lower levels are now known to cause significant complications over time. Even though you might "pass" with a blood pressure of 150 over 94, it is not healthy, nor is it likely to allow you to continue flying for very long. The bottom line: get treatment, especially now since the side effects of treatment are minimal. If your blood pressure exam repeatedly gives a pressure over 120-130 over 80-85, seriously consider acting NOW!

Other "non-medical" actions you can take to improve your blood pressure include:

- Lose weight if you are over your ideal weight. Look at your Body Mass Index (BMI) (www.nhlbisupport.com/bmi/) as a guide;
- Exercise;
- Eat a low-salt diet. This may be difficult as many people take in up to 6,000 mg of salt per day when they need only 200 mg;
- Eat a diet low in fats and rich in fruits and vegetables. Corn is great, but butter is not;
- **Do not smoke.** If you do, seriously consider stopping…**immediately**.

Another easy test to monitor your cardiac function is your pulse. For men, it should be in the range of 70 beats per minute; for women, around 75 beats. Certainly when you are under stress, like during your flight physical, your pulse may go up, but when you are at rest take a moment to measure it. Most of those blood pressure machines at the pharmacy or even at the grocery store will provide your pulse rate. If your pulse rate is repeatedly above 70 beats, your heart is just working too hard. Some of the factors that can cause a higher heart rate are, obviously, physical exertion, but also obesity, stress, coffee, smoking and medication; so pay close attention to those factors as well.

What does it take to complete the initial AME physical exam after you have been diagnosed with high blood pressure? First, you need to provide a complete personal, social and family history about high blood pressure or any other risk factors. For example, a family history of high blood pressure is common among pilots who also have hypertension. You will need a statement from your physician about your treatment, its effects and any risk modifications that you have worked out. You will also need some sequential blood pressure readings to show that the treatment has been effective. And finally, you will need to get lab tests to

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ELTs and PSTs

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system from the National Oceanic and Atmospheric Administration's (NOAA) website (http://www.sarsat.noaa.gov/):

"COSPAS-SARSAT is an international, humanitarian search and rescue system that uses satellites to detect and locate emergency beacons carried by ships, aircraft, or individuals. The system consists of a network of satellites, ground stations, mission control centers, and rescue coordination centers.

When an emergency beacon is activated, the signal is received by a satellite and relayed to the nearest available ground station. The ground station, called a Local User Terminal, processes the signal and calculates the position from which it originated. This position is transmitted to a mission control center where it is joined with identification data and other information on that beacon. The mission control center then transmits an alert message to the appropriate rescue coordination center based on the geographic location of the beacon. If the location of the beacon is in another country's area of responsibility, then the alert is transmitted to that country's mission control center.

The COSPAS-SARSAT system provides a tremendous resource for protecting the lives of aviators and mariners that was unthinkable prior to the Space-Age. With a 406 MHz beacon, a distress message can be sent to the appropriate authorities from anywhere on Earth 24 hours a day, 365 days a year."

When a Local User Terminal receives a distress signal originating within the US, the information is directed to our mission control center at Suitland, Maryland. From there the information is sent to either the Coast Guard (maritime SAR) or the Air Force Rescue Coordination Center (AFRCC – inland SAR) for processing. AFRCC has a memorandum of understanding with all 50 states specifically addressing the dissemination of this information to the lawfully designated search agency. If the distress signal originates in Idaho, AFRCC then forwards the distress information to the Idaho Division of Aeronautics who, under Idaho statute, is responsible for coordinating the aerial search for missing and overdue aircraft and airmen.

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Medical Matters

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include: serum electrolytes, lipid profiles, glucose and a resting Electrocardiogram. If everything is acceptable, your AME can issue the medical certificate for the normal duration.

Physicals subsequent to the initial exam will require reports demonstrating that the treatment is both effective and without complication. At a minimum, you will also need a letter from your physician about the medications used, the doses, the quality of blood pressure control and any secondary effects from your high blood pressure such as on the kidneys, eyes or brain. This letter is essential to avoid a delay in certification. You will also need the results of any tests that your physician may have requested, for instance, lab tests or Electrocardiograms. If you are taking a diuretic, such as HTCZ, you will need a serum potassium level as well. If you do not have a personal physician, your AME can complete all of the necessary testing and reports.

In all of this discussion, the key point to remember is that since the treatment of high blood pressure for most pilots has become so routine and complication-free, we see more problems as a result of failing to receive proper treatment than from the hypertension itself. No longer does a pilot need to fear his/her blood pressure, as long as he/she gets it under control. Don't wait until you have a complication to stop the "silent killer" in its tracks!

The Color of Aviation:

Jim Otey – "Aviation is what I do"

By Jack McNeel
Idaho Senior Independent
Reprinted with permission

After spending 30 years in the banking business, Jim Otey's big switch in careers took him to the Boeing Company where he ended his career as a test director at Experimental Flight Test for the 777 program. Jim's love of aviation comes through loud and strong, and retirement has not changed those feelings. "I'm pretty much a one-dish dog," Jim says. "Aviation is what I do."

Jim and his wife Inge moved to Lewiston after he retired from Boeing in 2000. "We had a gold wing motorcycle and came to visit a former workmate. We liked what we saw and here we are."

Aviation has been in Jim's blood since his teens. "When I was 18 I won a model airplane contest and the prize was an hour of flight instruction. That set the hook," he laughs. "When I was 19 I had my own airport and my own airplane. I built the airport with some guys. It was a residential air park. In fact, I lived on a different residential airpark for 22 years. Our home was on a taxi-way and my back yard was a big hangar."

Jim joined the Lewiston chapter of the Experimental Aircraft Association (EAA) soon after retiring. The chapter was quite small, but now numbers about 50 members. Jim was surprised the group was not larger considering the heritage this region has in aviation.

"Because of the Ag business primarily," he says. "Also, one of the first airlines in this part of the world started here in Lewiston – Zimmerly Airlines."

Jim alongside his latest project, the Curtis Model D Pusher.

Jim and several other members were able to negotiate a lease for five acres of ground at the Lewiston airport for $100 a year, because it was old landfill and not usable for any commercial purpose. The EAA chapter borrowed money and erected a building six years ago with volunteer workers. The building is now available free for anybody that wants to hold a public meeting. It contains a kitchen and is large enough for members to work on planes inside.

The members build their own planes or restore antique airplanes and they all fly. "Their backgrounds are soup to nuts," Jim says. Members include a dentist, optometrist, truck driver, and shop owner, to name a few.

Jim owns a 1946 Aeronca Champ that he restored after it had sat for 35 years since being wrecked in 1962. "It's my fishing vessel. I use it to go fishing in the hills. Our mountains are full of little (landing) strips," Jim explains.

Jim's current project is unique and likely to receive considerable press coverage next summer. He and a friend are midway through the construction of a replica of the first plane to fly in Idaho, which was on October 13, 1910.

Jim's partner, Dean Wilson, is an old Ag pilot who has designed and built several planes over the years - a designer known worldwide for his aircraft designs.

Jim told how the first flight was in Lewiston because it was the original capital of Idaho, although Boise was also competing for the flight. Local residents contacted Glen Curtis in Hammondsport, New York, to have a demonstration pilot bring one of their planes out on the train. The plane was actually assembled in Clarkston then successfully flown to Lewiston on October 13 for Idaho's first flight. The next day was not as successful as they had an accident after takeoff.

"I don't think anyone was killed," Jim adds. "J.J. Ward was the name of the pilot." A book entitled *Wings over Idaho* tells of that flight with photos taken at that time.

The 100th anniversary of that flight is coming up and has inspired the two men to build a replica of that 1909 plane, a Glenn Curtiss Model D Pusher.

Jim Otey

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Jim Otey

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In one of those freakish coincidences, just a couple of weeks after they first talked about it, a man they did not know by the name of Roy Daniels called the EAA phone line. He had been helping his sister move out of her old house and found a roll of airplane plans and wondered if EAA folks could use them. Jim reports, "I rolled them out and there's the airplane. Incredible!"

They have now been working on the plane for about a year and estimate that between them, they have logged about 2,000 hours – and are roughly half done. "It's been a long deal because finding materials we needed was not an easy task and very expensive wood." Jim described one piece of spruce. "It was absolutely clear, 24 feet long, an inch thick, and six inches wide. It cost $800! You turn most of it into sawdust. You cut it into 1/4-inch strips and then glue it all back together."

Curtis Model D Pusher

All the wooden structure is now complete. Solid pieces are spruce and laminated pieces are spruce and sycamore. It has required a lot of engineering to accommodate the new materials. Sycamore is used in place of ash, a new type of engine will be installed, and motorcycle wheels will replace the original bicycle wheels that were a weak link in the original design. Better steel and welding will replace the early 1900s steel which had to be braised together. The parts require that a jig be used to make the parts precise and maintain straightness and rigidity; a jig might require a week to make for just one part. This all adds to the mounting number of hours of construction. The FAA must take a look at the completed plane as they have final say on whether or not it can be flown.

"We hope that by about the first of June next year we'll have a flyable airplane. That will give us all summer to play with it; make sure it is safe and not going to kill somebody; and then possibly encourage people to come take a ride for a donation. We'll try to make back a couple of the dollars we've got in this thing."

"The culmination is the commemorative flight of the 100th anniversary of flight in the state. If the airplane's still in one big piece, which would be good," Jim laughs, "we'll hopefully find a home for it. There is a nice aviation museum in Nampa, the Warhawk Museum. We would love to sell him the plane. We would like to get enough to pay off this building. Anything we get back we will put into the mortgage. It will be done as a donation."

Jim Otey and his wife have a large landscaped lawn that takes time, but the bulk of his time is aviation. "I've been a flight instructor. I have taught 250 people to fly. I worked at Boeing in Flight Test as a test director. I have an aircraft mechanic's license. I have rebuilt airplanes. That's pretty much what I do."

Many thanks to Jack Love, Publisher, ***Idaho Senior Independent***, for his assistance and Jack McNeel, author, for granting us permission to use his article and photos. – Editor

Idaho Centennial of Flight Update:

First Flight Pusher Construction Continues…

Pusher replica as it moves toward historic October flight.

The construction of the 1909 Glenn Curtiss Model D replica, which will be used to commemorate the 100th year of aviation in Idaho, continues to be built in Lewiston where the first flight took place in October of 1910. The basic airframe is now complete, with the O-200 engine mounted and the wings temporarily attached for fitting and rigging of the ailerons.

The next major activity will be the attachment of the biplane configuration canard using recently imported structural bamboo, after which the rudder, horizontal stabilizer and rear elevator will be fitted using additional bamboo. Roughly 500 feet of 3/32nd-inch bracing cable will be used for flying and landing wires from the original pusher, when it was flown by pilot J.J. Ward.

Visitors are welcome to view the construction of the machine. However, please contact Jim Otey at 208-746-8488 for an appointment. Donations to this project are greatly appreciated.

Calendar of Events

February

5-6 **Flight Instructor Refresher Clinic**, Cambria Suites, 2970 W. Elder St, Boise, 208-344-744 (room reservations); rate $75/night (tell guest services "Division of Aeronautics Flight Instructor Refresher Clinic") Clinic cost $90 before January 29, 2010.

March

19 **IA Renewal**, Best Western Vista Inn at the Airport, 2645 Airport Way, 208-336-8100 (room reservations), rate $86/night (tell guest services "Idaho Transportation Department, Division of Aeronautics") Cost is $60.

April

16-17 **Flight Instructor Refresher Clinic**, AvCenter Hangar, 103 Municipal Drive, Nampa, upstairs. Clinic cost $90 before April 9, 2010.

*Email your event information to tammy.schoen@itd.idaho.gov for inclusion in the **Rudder Flutter** and the Aeronautics website.*

Missing or Overdue Aircraft???

Report It Immediately!!!

Idaho State Communications
800-632-8000 (Available 24/7/365)

Great Pilot Stocking Stuffers!

Idaho Airport Facility Directory – NOW AVAILABLE! NEW!

- Runway end elevation differentials at select backcountry airports,
- CTAF shown more prominently for each airport,
- AWOS, ASOS frequencies added,
- Top spiral bound for easy kneeboard display,
- Additional private and bordering airports listed, and much more!
- $10 each.

Idaho Aeronautical Charts still available!

- Numerous additional backcountry airstrips,
- Updated depictions of the remaining fire lookouts as landmarks,
- Significantly more information on Idaho airports listed on back, and
- Printed on synthetic, tear and water resistant paper.
- $10 each.

Can be purchased by calling Aeronautics at 208-334-8775 or coming into the office at 3483 Rickenbacker St., Boise, ID.

Surface Movement Guidance Control System (SMGCS)

From our friends at the Boise Air Traffic Control Tower

Just what we need, another aviation acronym! SMGCS (often called "Smigs") is **S**urface **M**ovement **G**uidance and **C**ontrol **S**ystem, a network of lights, taxiway markings and regulations which facilitate the movement of aircraft and vehicles during periods of very low visibility. SMGCS was developed to safely move aircraft when ground visibility drops below 1200 feet Runway Visual Range (RVR), at which time aircraft become virtually invisible to the tower. While the average VFR general aviation pilot would not utilize the system, it is worth knowing what the markings are and to be generally familiar with the concept…particularly if you aspire to an instrument rating.

As many of you may recall, the worst aviation accident in history occurred when two B747s collided on a fog shrouded runway in Tenerife, Canary Islands.

The inherent dangers of airport surface operations go up exponentially during periods of low visibility. During these times, air traffic controllers are highly dependent upon accurate position reports by pilots, especially when Airport Surface Detection Equipment (ASDE) is unavailable as a backup means of tracking aircraft movement. As a pilot, perhaps you have noticed the pink squares and circles with associated

numbers painted on the taxiways here at Boise. Those markings are one component of the SMGCS guidance system and are used as reference points by controllers and pilots. "Follow me" vehicles are another component and are used to lead aircraft to or from destinations on the airport. Other elements of SMGCS are elevated runway guard lights (wig-wags), runway "in pavement" lighting and RVR instruments.

Anyone wishing to participate in SMGCS operations must sign a letter of agreement which outlines responsibilities and procedures. As an added precaution, whenever SMGCS operations are in effect, all airport perimeter gates are in lock down which prevents inadvertent vehicle transgressions. The addition of SMGCS at Boise along with a more sophisticated Instrument Landing System (ILS) permits aircraft to continue safely operating in all but the most severe weather conditions.

Photos courtesy of Lee Hearst

Flying with the Three Musketeers

By: Mike Pape, Aeronautics Director of Flight Operations

During the golden age of flight, the one aircraft company of envy was Beechcraft. Its inventory included the famous Twin Beech, the Staggerwing, the sleek Bonanza, and the Baron. General aviation pilots in the 1950's sought them out by the hundreds. A problem Beech had yet to overcome was the availability of an entry level aircraft to lead pilots into these more complex models. Cessna and Piper had firm control over that market. And so Beech launched the Musketeer. But the more interesting part of the story was the way they rolled it out…in hairdos and high heels!

Gene Nora Jessen today - Printed with permission of Bonnie Robinson of BJR Design

Long-time Idaho pilots will remember the names Bob and Gene Nora Jessen, the stalwart proprietors of Idaho Beechcraft and Boise Air Service from 1967 until 2005. What is less known are the pioneering efforts of Gene Nora herself. Her latest book, ***"The Fabulous Flight of the Three Musketeers"*** takes her readers on a fascinating memoir of her life as a female pioneer in general aviation. Gene Nora's previous book ***"The Powder Puff Derby of 1929"*** was published in 2002.

In 1962 Beechcraft sought out its first female sales demonstration pilots. Their letter to Gene Nora offering her a job interview included a very dated caveat, ***"…if you are the lady your photo indicates".*** At the time, Gene Nora was working as a 25-year-old flight instructor at the University of Oklahoma. She had also participated in the Lovelace Space Testing program, a unique program where female subjects were put through the same physical tests as the Mercury astronauts.

Gene Nora (left) with her fellow Musketeers
Printed with permission of Bonnie Robinson of BJR Design

The demo pilot job Gene Nora signed on for entailed flying as a wingman …er…woman, in a three-ship flight of Beech Musketeers, to all 48 contiguous states in 90 days. It all began on July 20, 1962, when the "Three Musketeers" took off from Wichita to introduce the new bird to America, in high heels and a dress. The pictures of Gene Nora could easily be mistaken for a housewife selling ***Arm & Hammer*** laundry soap rather than airplanes. How do you fly in high heels? "Hook your heels under the rudder pedals and keep the balls of your feet on the brakes, that was the easy part," says Gene Nora, "stepping out of the airplane onto the wing in a crosswind was the real challenge." I wonder if in 1962 Beech really intended to market the Musketeer with an attitude of "so simple a girl can fly it" or just pure sexual connotation. Nonetheless, Gene Nora proudly flew through the male pilot world in her trusty Musketeer without a chip on her shoulder or any hint of favoritism.

Printed with permission of Gene Nora Jessen

This Musketeer flight takes the reader from the Space Needle to Pike's Peak, from the Grand Canyon to the Bahamas. Her flight into Idaho from Billings includes a wonderful description of our state from above. Gene Nora's sales personality shines through in her enthusiasm for flying, fascination with her birds-eye view and in meeting new friends along the way.

I can't think of a better way for an Idaho pilot to face the winter weather than to break out this book and fly across America with Gene Nora Jessen and the Three Musketeers.

Note: The book, "***The Fabulous Flight of the Three Musketeers***" can be purchased through Amazon.com or at the Boise Pilot Shop.

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McCall, Gateway To The Idaho Backcountry

Idaho Pilots compete in 2009 Air Race Classic

By: Frank Lester
Safety/Education Coordinator

Local pilots, Gene Nora Jessen and Cammie Patch battled strong headwinds, 100 degree temperatures and 30 other teams in the women's 2009 Air Race Classic last June. Less than one point separated first and second places during the three-day, 2,359-nautical-mile competition.

First place went to Kelly Burris, an attorney from Michigan, and Erin Recke, a flying partner who learned to fly at Western Michigan College. The race had seven collegiate teams, including two from last year's winner, Embry-Riddle Aeronautical University; two from the University of Oklahoma; and one each from Purdue University, Kansas State University and Indiana State University.

The race began in Denver and included 10 stops in cities such as Sweetwater, Texas; Russellville, Arkansas; Sparta, Tennessee; and Racine, Wisconsin, before ending in Iowa. However, before the crews could depart, each aircraft had to be inspected to ensure that they were stock and legal. The pilots also had to pass inspection, providing inspectors their pilot certificates, medicals and proof of flight reviews. They even had to show that they had a copy of the race rules in hand.

Gene Nora and Cammie

Assessing the aircraft's handicap is the most critical part of the inspection. I asked Gene Nora if she could shed a little light on the subject for me. She got a kick out of the question saying, "I wish I knew." She explained in an email that the airplane must be stock and the top speed is taken from the manufacturer's numbers (too bad if they exaggerate). If you've modified the airplane, for example added gap seals, you'll receive a penalty (increase) on your handicap of several knots since the aircraft will now go a little faster. On the Bonanza, if you remove the stair step you've modified the airplane and your handicap is increased. Each airplane is inspected at the start of the race and the inspectors are ever alert for any sneaky modifications - they've seen it all. If you disagree with your assigned handicap, the airplane will be flown prior to the start of the race for verification.

According to Gene Nora's and Cammie's blog, "…The flying is timed from each required stop then applied to each airplane's handicap. Our Beech Sierra is handicapped at 123.39 knots. The Denver Centennial Airport start was quite hot and, of course, a mile high. 50% of the teams were first-timers this year including five college teams. Some had little knowledge of density altitude's effect on engine output and Centennial gave us their short runway. So right away there was a learning experience with some less than smooth departures."

Victoria Dunbar took top collegiate honors with Jessica Campbell in a four-seat, Diamond DA40. "There is a lot of strategy to the race because you can't just think about the next leg," Dunbar said. "You have to think, 'well, if we go now, what is the weather going to be like when we get there for the next leg; should we try to get to [the] next stop because then we would have a tail wind?' So you can't just think about one step at a time, but what will happen further down the line."

Gene Nora blogged that a variety of airplanes participated, mostly Cessnas and Pipers with just 3 Beechcraft: their Sierra, a Debonair and a Bonanza.

Writing in the aftermath, they agreed that the race was flown safely and with great camaraderie among the pilots. There were some fascinating women they met

Air Race

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Air Race

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including a veterinary ophthalmologist, a pharmacology professor, a movie songwriter, a patent attorney, a New Zealander, a State Police Trooper and a host of professional pilots and flight instructors. They enjoyed the sights, the people, and the flying… and commiserating about the heat.

Gene Nora pointed out to me in a recent email that the first thing everyone always asks is "…did you win? Of course our friends were astonished that we not only didn't win but finished in the middle of the pack!" I can imagine the smile on her face when she continued, "Our list of excuses is too lengthy to include here."

Women's air racing began in 1929, making this year's race the 80th Anniversary. Early racing was organized by the Ninety-Nines, an international organization established in 1929 by 99 women pilots including Amelia Earhart, to provide mutual support and [the] advancement of aviation. After World War II, the All Women's Transcontinental Air Race, better known as the Powder Puff Derby, was held. Air Race Classic, Ltd. took over air racing in 1977 and was reincorporated in 2002 as Air Race Classic, Inc.

Departure from Centennial

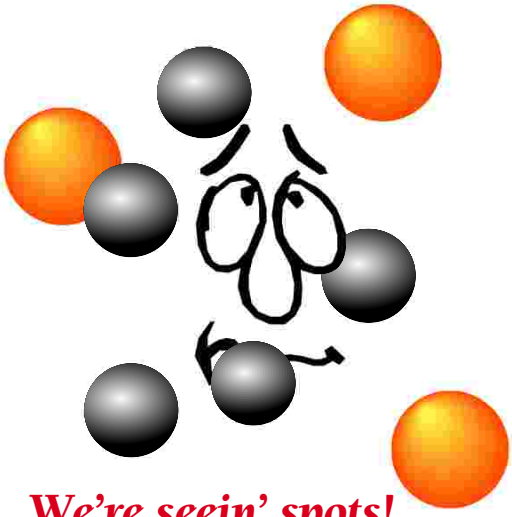
Photos courtesy of Cammie Patch.

Above, short final to the Flying B Ranch. Fortunately, no serious Injuries

ELTs and PSTs

Continued from page 9

Besides the fact that the COSPAS-SARSAT satellites are not monitoring the 121.5/243.0 MHz ELTs, the newer, digital 406s are far superior to the older, analog 121.5s. The 406 MHz ELT is built stronger, is more powerful (5 watts vs. 1 watt), and provides a digital data burst, which includes the name of the owner with pertinent contact information, the tail number and hangar location of the aircraft (if the ELT has been properly registered). Bogus 121.5 ELT transmissions were a constant headache and could take a few hours to several days to confirm the location and shut down the ELT. A properly registered 406 MHz ELT with up-to-date contact information can usually be confirmed as actual or false within a few minutes by AFRCC. Saving an enormous number of man-hours. If the 406 MHz ELT is inadvertently activated, it turns on an indicator light in the



We're seein' spots!

cockpit and transmits an audible signal that can be heard in and around the aircraft, alerting you that your ELT is transmitting. On a good day, the satellite could isolate a 121.5 MHz ELT beacon to within 12 miles of its actual position. But distortion of the analog signal by terrain, metal buildings, power lines and other commonly used devices greatly reduced this accuracy. A 406 digital signal, even without a GPS, can be isolated to within 5 miles of the actual location and to within a few hundred feet when connected to a GPS. One last detail, the 406 MHz ELT transmits on 121.5, 243.0 and 406 MHz **simultaneously**. Yes; it still transmits on 121.5 so you can hear it on your radio, and VHF homing devices can still be used to locate it.

So…why the hesitation to switch? The answers I have heard around the State fall into two categories: 1) I don't want to do it; and 2) It is too expensive. I don't have a response to the first answer, but the second answer is worth exploring. The cost of a 406 MHz ELT has indeed come down. It is the cost of installation that appears to be the biggest sticking point, which, along with other installation variables, will vary according to the age of the 121.5 MHz ELT being replaced. True, I am not the one paying the bill. However, I firmly believe that the cost of upgrading is cheap insurance, especially comparing what you get over what you have. **REMEMBER: Relying on a 121.5 MHz ELT, a Personal Locator Beacon (PLB) or a PST for your aircraft's emergency beacon could delay an aerial search by AFRCC and Aeronautics by hours, even days!**

One closing thought, prepare to be found: Tell someone that you are going to fly, your route of flight, give them a time when you plan to return, or a specified time that you will give them an "I'm okay" call; then follow through! If you miss that call for any reason, tell them to contact Idaho State Communications (800-632-8000) and report an overdue aircraft **immediately**. They will not be scolded or criticized for making the call even if you are found to be just plain forgetful. State Communications will alert Aeronautics to the overdue aircraft and we will determine its status. We treat **every report** as a potential search. That is our responsibility under the law, and the sooner we are notified, the sooner we can employ the assets necessary to resolve the situation.

If you own a SPOT (the most prevalently used PST) or plan to buy one, then stay tuned. In the next issue we will discuss the real capabilities and limitations of these devices when used in an aircraft. The three SPOT activations we received last summer brought to light serious misconceptions about the SPOT. Also, abuses of these devices have caused serious concern among SAR groups.

Until then, fly safe; fly smart.

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